

Appl. No. 10/748,830
Amdt. Dated: Nov. 4, 2005
Reply to Office Action of Aug. 24, 2005

Amendments to the Specification

Please replace paragraph [0011] with the following amended paragraph:

[0011] The light source 30 is a white light source such as a metal halide lamp. The light modulation unit 32 corresponds to a pixel image of information displayed on the screen 38. Referring to FIG. 2, the light modulation unit 32 ~~comprises~~ includes a Complementary Metal-Oxide Semiconductor (CMOS) layer 322, a metal layer 323, a torsion layer 324 and a ~~micro-lens~~ micro-mirror array 325 formed on a silicon substrate 321 in that sequence. The ~~micro-lens~~ micro-mirror array 325 is made by a micro-electromechanical system (MEMS), and comprises a red micro-mirror (not labeled), a green micro-mirror (not labeled) and a blue micro-mirror (not labeled). Aluminum is evaporated on an outer surface of the micro-mirrors in order that the micro-mirrors operate as square mirrors (for example) having high reflectivity. An address electrode layer (not shown) is formed on the torsion layer 324, for providing a driving signal to the ~~micro-lens~~ micro-mirror array 325. Each micro-mirror of the ~~micro-lens~~ micro-mirror array 325 can perform

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switching between an on state and an off state according to a driving signal. In the on state, the micro-mirror reflects light beams emitted from the light source 30 to the projection lens 34. In the ~~off state~~ off state, the micro-mirror does not reflect any light beams. For example, when the red micro-mirror is in the on state according to a driving signal, it reflects incident light beams such that red light beams are obtained. On the other hand, in the off state, the red micro-mirror does not reflect any incident light beams, which produces no color (i.e., black).

Please replace paragraph [0013] with the following amended paragraph:

[0013] In use, the modulation signal source 43 outputs a modulation signal, and the modulation signal is compared with the sawtooth wave signal in the comparator 44. The comparator 44 outputs a driving signal to drive the micro-mirrors. The comparator 44 outputs an on-state driving signal to each micro-mirror when the modulation signal is lower than the sawtooth wave signal, and outputs an off-state driving signal to the micro-mirror when the modulation signal is equal to or higher than the sawtooth wave signal. In other words, the driving signal consists of

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two digital states: one digital state can maintain one micro-mirror of the ~~micro-lens~~ micro-mirror array in the on state, and the other digital state can maintain the micro-mirror in the off state. Accordingly, the red micro-mirror can offer two color states, red or black, the green micro-mirror can offer two color states, green or black and the blue micro-mirror can offer two color states, blue or black. As a result, the micro-mirror array 325 can offer eight (2^3) color states: black, black, black; black, black, red; black, red, green; black, green, black; red, green, blue; red, blue, black; green, blue, black; and blue, black, black. Thus, the light modulation unit 32 performs switching between the on state and the off state according to a driving signal. In particular, the light modulation unit 32 reflects light beam emitted from the light source 30 to the projection lens 34 in the on state, and does not reflect the light beams to the projection lens 34 in the off state. The projection lens 34 enlarges and displays the light beams reflected by the micro-mirrors on a screen, for generating full color images thereon.